IN THE CLAIMS:

Please amend the claim as follows:

1. (Currently Amended) A multi-wavelength light source comprising:

a substrate;

a laser laminated on a first portion of the substrate wherein said laser adapted for generating multi-wavelength light including a plurality of channels having different wavelengths when driven by a driving current below a predetermined threshold current; and

a semiconductor optical amplifier being laminated on a second portion of the substrate and having a first end surface, the first end surface being slanted and opposed to a side surface of the laser,

wherein the semiconductor optical amplifier is adapted to reduce a relative intensity ~~of~~ noise in the plurality of channels of the multi-wavelength light and to amplify the multi-wavelength light output from the laser simultaneously, and

wherein a band gap of the semiconductor optical amplifier is smaller than that of the laser.

2. (Previously Presented) The multi-wavelength light source as claimed in claim 1, wherein the laser comprises a fabry-perot laser, and the multi-wavelength light source further comprises:

a high reflection layer coated on a first end surface of the multi-wavelength light source, the first end surface of the multi-wavelength light source including a first end surface of the fabry-perot laser; and

anti-reflection layers being arranged on a side surface of the fabry-perot laser, the slanted

surface of the semiconductor optical amplifier, and a second end surface of the multi-wavelength light source,

wherein the second end surface of the multi-wavelength light source includes a second end surface of the semiconductor optical amplifier means.

3. (Currently Amended) The multi-wavelength light source as claimed in claim 1, ~~wherein a band gap of the semiconductor optical amplifier means is smaller than that of the laser and~~ wherein a spectrum of the multi-wavelength light outputted from the laser coincides with a gain spectrum that is amplified by the semiconductor optical amplifier.

4. (Previously Presented) The multi-wavelength light source as claimed in claim 1, wherein the slanted surface of the semiconductor optical amplifier opposed to the side surface of the laser is inclined at a predetermined angle with respect to the side surface of the laser.

5. (Currently Amended) A multi-wavelength light source comprising:

a fabry-perot laser adapted for generating multi-wavelength light including a plurality of peaks having different wavelengths when driven by driving a current below a predetermined threshold current; and

a semiconductor optical amplifier ~~means~~ being coupled to an output of the fabry-perot laser and being configured to amplify the multi-wavelength light outputted from the fabry-perot laser,

wherein the semiconductor optical amplifier means is configured to reduce a relative intensity of noise in the plurality of channels of the multi-wavelength light and amplify the

multi-wavelength light simultaneously, and

wherein a band gap of the semiconductor optical amplifier is smaller than that of the fabry-perot laser.

6. (Currently Amended) The multi-wavelength light source as claimed in claim 5, ~~wherein a band gap of the semiconductor optical amplifier is smaller than that of the fabry-perot laser and~~ wherein a spectrum of the multi-wavelength light output from the fabry-perot laser coincides with a gain that is amplified by the semiconductor optical amplifier.

7. (Previously Presented) A wavelength division multiplexing system comprising a central office, a remote node coupled to the central office by an optical fiber, and a plurality of subscribers connected to the remote node, the central office comprising:

a light source section including a laser and a semiconductor optical amplifier, the laser being driven by driving current below threshold current and configured to generate multi-wavelength light including a plurality of downstream channels having different wavelengths, and

the semiconductor optical amplifier configured to amplify the multi-wavelength light in a gain saturation state and to output the amplified multi-wavelength light;

a demultiplexer configured to demultiplex the multi-wavelength light into a plurality of downstream channels having different wavelengths and to output the demultiplexed downstream channels;

a first multiplexer/demultiplexer configured to demultiplex an upstream optical signal outputted from the remote node into a plurality of upstream channels having different wavelengths and configured to multiplex the downstream channels into a downstream optical

signal so as to output the multiplexed optical signal to the remote node; and

a plurality of photodetectors configured to detect the upstream channels demultiplexed by the first multiplexer/demultiplexer,

wherein a band gap of the semiconductor optical amplifier is smaller than that of the laser.

8. (Original) The multi-wavelength light source as claimed in claim 7, wherein the laser of the light source section includes a fabry-perot laser.

9. (Previously Presented) The multi-wavelength light source as claimed in claim 7, wherein the central office further comprises:

a plurality of modulators configured to modulate the downstream channels demodulated by the demultiplexer; and

a plurality of wavelength selection couplers located between each of the modulators and the first multiplexer/demultiplexer and configured to output the downstream channels that are output from the modulators to the first multiplexer/demultiplexer and to output the upstream channels, which are outputted from the first multiplexer/demultiplexer, to a corresponding photodetector.

10. (Previously Presented) The multi-wavelength light source as claimed in claim 7, wherein the remote node includes a second multiplexer/demultiplexer configured to multiplex a plurality of upstream channels having different wavelengths, which are output from the subscribers, into an upstream optical signal, to output the multiplexed optical signal to the central

office, to demultiplex the downstream optical signal output from the central office into a plurality of downstream channels, and to output the demultiplexed downstream channels to a corresponding subscriber.

11. (Previously Presented) The multi-wavelength light source as claimed in claim 7, wherein each subscriber comprises:

a photodetector configured to detect a corresponding downstream channel;

a light source configured to output the upstream channel to the remote node; and

a wavelength selection coupler configured to output the downstream channel to the photodetector and to output the upstream channel generated by the light source to the remote node.

12-20. (Canceled)